Serious and Other Selected Adverse Events Reported for Human Gene Transfer Protocols Recombinant DNA Advisory Committee Meeting March 2005

Protocol Number: 223

Protocol Title: Phase I Study of Chemokine and Cytokine Gene Modified Allogeneic Neuroblastoma Cells for Treatment of Relapsed/Refractory

Neuroblastoma Using a Retroviral Vector.

| DocID# | Receipt Date | Event Date | Event Description |
|--------|-----------------|---------------|--|
| 6568 | 12/13/2004 | 2003 | Subject, with a history of stage 4 neuroblastoma was admitted to hospital for untreatable hemorrhagic cystitis. During the work-up, further significant progression of neuroblastoma was found, involving bone marrow, liver and central nervous system. Subject developed progressive organ failure and died. |
| 6584 | 12/17/2004 | 2003 | Follow-up Investigator: Provided additional investigational product details and dosing information. |

Protocol Number: 366

Protocol Title: A Phase III Multi-Center, Open-Label, Randomized Study to Compare the Overall Survival and Safety of Bi-Weekly Intratumoral

Administration of RPR/INGN 201 Versus Weekly Methotrexate in 240 Patients with Refractory Squamous Cell Carcinoma of the

Head and Neck (SCCHN).

| DocID# | Receipt Date | Event Date | Event Description |
|--------|-----------------|---------------|---|
| 6516 | 11/22/2004 | 11/09/2004 | Subject was admitted for possible acute inflammation of skin tissue of neck during Week 2 of the investigational regimen. A CT scan |
| | | | showed an increase in tumor size with some areas of tumor necrosis (tumor cell death). Both the Investigator and the Sponsor assess the event as possibly related to the investigational agent. |

Protocol Title: Gene Therapy for Patients with Fanconi Anemia: A Pilot Study.

| DocID# | Receipt Date | Event Date | Event Description |
|--------|-----------------|---------------|--|
| 6521 | 11/23/2004 | 11/20/2004 | Subject with chronic neutropenia, related to underlying Fanconi anemia was admitted to Bone Marrow Transplant inpatient unit observation five days after receiving infusion of investigational agent. Blood work-up indicated neutropenia, elevated lymphocy presence of atypical lymphocytes. Subject was treated for neutropenia, remained afebrile and did well during hospital stay. Su was discharged within 2 days in good condition. The Investigator considered that the event was not likely to have been caused investigational agent. |

Protocol Number: 393

Protocol Title: Phase II Study of a TGF-β2 Antisense Gene Modified Allogeneic Tumor Cell Vaccine in Patients with Stages II-IV Non-Small Cell

Lung Cancer.

| DocID# | Receipt Date | Event Date | Event Description |
|--------|-----------------|---------------|---|
| 6560 | 12/08/2004 | 11/12/2004 | Subject was diagnosed with Chronic Myelocytic Leukemia (CML) approximately 6 months after receiving the last injection of investigational vaccine. Treated with Gleevec. |
| 6570 | 12/14/2004 | 11/12/2004 | Follow up Sponsor: Subject received 16 out of 16 injections of investigational vaccine on approximately a monthly basis. Screening and on-study related labs indicated subject had chronic low white blood cell (WBC) counts throughout the trial. Screening WBC was within inclusion range, 23 of 30 lab tests were below the lower normal limit of 4.1x10³/mm³. The last five on-study WBC tests were all within normal range. Bone marrow biopsy results suggested an abnormal decrease in WBC and normocytic anemia. No evidence of primary or metastatic neoplasm. Marrow was slightly hypercellular with trilineage hematopoiesis and iron stores present. Flow cytomes showed no evidence of lymphoproliferative disorder. Bone marrow sample performed. Pathologic diagnosis: leukocytosis with leukoerythroblastic reaction with packed marrow consistent with myeloproliferative disorder, (CML) probably post chemotherapeutic. Flow cytometry results were suggestive for slightly left-shifted myeloid maturation. Chromosome analysis is pending. |

Protocol Number: 403

Protocol Title: A Randomized, Double-Blind, Placebo Controlled Study to Evaluate the Effect of Ad5FGF-4 on Myocardial Perfusion Defect Size

and Safety in Patients with Stable Angina.

| DocID# | Receipt Date | Event Date | Event Description |
|--------|-----------------|---------------|---|
| 6606 | 12/27/2004 | 04/20/2004 | Subject was diagnosed with Non-Small Cell Lung Cancer approximately three and one-half years after receiving the study agent. The |
| | | | subject received surgery and chemotherapy for the malignancy that was considered by the Investigator to be "possibly related" to the investigational agent previously received. The Sponsor assessment was "unlikely" related to study agent. |

Protocol Title: A Multicenter, Randomized, Double-Blind, Placebo Controlled, Dose-Response Study to Evaluate the Efficacy and Safety of Ad5.1FGF-4 in Patients with Stable Angina.

| DocID# | Receipt Date | Event Date | Event Description |
|--------|-----------------|---------------|---|
| 6522 | 11/24/2004 | 06/10/2004 | This follow-up report clarifies that the Investigator considered this event of increased chest pain as "possibly related." |
| 6510 | 11/18/2004 | 08/01/2004 | Folllow up Sponsor: MRI ordered in response to increased left leg numbness and new right leg numbness led to initial diagnosis of a spinal cord tumor and abnormal brain scan. Study is blinded, Sponsor considers the event as "unlikely" related to study product. |
| 6545 | 12/07/2004 | 08/01/2004 | Follow-up Sponsor: CT scans of abdomen/pelvis and pancreas ordered. Biopsy of pancreas is pending. Attribution remains "unlikely" related to study agent. |
| 6604 | 12/27/2004 | 08/01/2004 | Follow-up Sponsor: The investigator considers that the spinal cord tumor is "probably related" to the study product. The sponsor assesses the relationship as unclassifiable since the blind is not broken. Further information pending. |
| 6503 | 11/15/2004 | 06/11/2004 | Follow up Investigator: Subject underwent a second MRI - results are pending. |
| 6583 | 12/17/2004 | 06/11/2004 | Follow-up Investigator: Biopsy specimen results. The primary lesion was a malignant melanoma of 8mm thickness and only one axillary lymph node was positive for malignancy. |
| 6582 | 12/17/2004 | 06/11/2004 | Follow up Investigator: Subject was admitted to hospital for total knee replacement surgery. |
| 6624 | 12/27/2004 | 06/11/2004 | Follow up Investigator: Subject had two follow-up MRI which showed a decrease in the brain lesion. The etiology of the lesion is unclear but the consensus among the physicians involved is that the brain lesion does not represent cancer and a follow-up MRI will be performed at a later date. The event was considered "resolved with persistent damage" since the mass is still present in the brain. |
| 6602 | 12/27/2004 | 06/11/2004 | Follow-up Sponsor: This report notes that the second MRI showed a brain mass. The Investigator stated that the lesion was probably a brain metastasis from the previously diagnosed melanoma and considered it "possibly related" to the investigational agent. |
| 6625 | 01/14/2005 | 06/11/2004 | Follow up Investigator: The screening and baseline laboratory values for the subject were provided. Results for Hepatitis C antibody, Hepatitis B surface antigen and HIV were negative. |
| 6504 | 11/15/2004 | 10/07/2004 | Subject was hospitalized for two days for worsening angina approximately one month before the site called to schedule the 18 month follow-up visit. Details of the hospitalization were not available to the research site at the time of this report, so the event was considered "possibly related." |
| 6505 | 11/15/2004 | 09/13/2004 | Subject had cholecystectomy at outside hospital two months prior to the 18-month follow-up visit. Event considered "possibly related" because no medical records of the event were available to the research center at the time of this report. |
| 6626 | 01/14/2005 | 09/23/2004 | Follow up Investigator: After evaluating prior test and scan results, several physicians considered that the subject's weakness was not related to a previously diagnosed brain mass. Additional recent MRI of the neck region showed multi-level degenerative changes and foraminal narrowing. Motor nerve conduction tests showed evidence of inflammatory polyneuropathy and electrodiagnostic evidence of acute degeneration in several muscles. Amyotrophic Lateral Sclerosis was considered a possibility. HTLV I/II tests were negative. |

| 6623 | 01/14/2005 | | Subject was diagnosed with melanoma approximately 14 months after dosing with blinded investigational agent. Prior MRIs one and two months prior showed a decrease in in the size of a brain lesion. Subject's present condition is progressively worsening requiring continuous use of a cane or walker. |
|------|------------|------|---|
| 6633 | 01/21/2005 | 2005 | Notification that the subject expired at home. No details were available at the time of this report. |

Protocol Title: A Phase I/II Double-Blind, Randomized, Placebo-Controlled Study to Assess the Safety and Efficacy of AMG0001 to Improve Perfusion in Critical Leg Ischemia.

| DocID# | Receipt Date | Event Date | Event Description | |
|--------|-----------------|---------------|----------------------|---|
| 6601 | 12/27/2004 | 12/16/2004 | | a nonmalignant growth found on colonoscopy 195 days after the last dose of blinded study agent. The subject was |
| | | | referred to a | surgeon. The Investigator considered this event "possibly related" to the investigational agent. |

Protocol Number: 549

Protocol Title: A Phase II, Multi-Center, Single Arm Evaluation of Preoperative Chemoradiation plus TNFerade™ Biologic (AdevEGR.TNF.11D)

Prior to Esophagectomy for Locally Advanced Esophageal Cancer.

| ID# | Receipt Date | Event Date | Event Description |
|-----|-----------------|---------------|--|
| 65 | 12/10/2004 | 2004 | Follow up Sponsor: Emergency room medical notes and pathology reports provided. Chronology of events as reported by the |
| | | | Investigator included. Death certificate pending. |
| 572 | 12/15/2004 | 2004 | Follow up Sponsor: Death certificate states esophageal cancer as primary cause of death. No other causes or contributing cause |
| | | | were listed on the death certificate. |

Protocol Number: 572

Protocol Title: A Phase I Trial of Intraprostatic Injection of CG7870 Followed by Three-Dimensional Conformal Radiation Therapy (3D-CRT) in Patients with Clinically-Localized Intermediate-Risk Prostate Cancer.

| DocID# | Receipt Date | Event Date | Event Description |
|--------|-----------------|---------------|---|
| 6544 | 12/03/2004 | 10/20/2004 | Follow up Sponsor: Subsequent to the inadvertant seven-fold dosing, the Sponsor submitted a copy of the corrective action plan. |
| 6590 | 12/20/2004 | 10/20/2004 | Follow-up Sponsor: Subject's platelet count normalized with values reported out to one-month post-cessation of oral steroids. |
| | | | Additional laboratory parameters, including liver transaminases, were unremarkable. |

Protocol Title: Phase I Study of Intravesical Recombinant Fowlpox-Gm-CSF (rF-GM-CSF) and/or Recombinant Fowlpox-Tricom (rF-TRICOM) in Patients with Bladder Carcinoma Scheduled for Cystectomy.

| DocID# | Receipt Date | Event Date | Event Description |
|--------|-----------------|---------------|---|
| 6492 | 10/19/2004 | 09/19/2004 | Follow up Investigator: Medical records were provided. |
| 6511 | 11/18/2004 | 09/19/2004 | Follow up Investigator: Subject tested negative for viral hepatitis A, B, and C. |
| 6527 | 11/24/2004 | 10/08/2004 | Follow up Sponsor: Copies of the Certificates of Analysis on the investigational agents provided. All release criteria were met. |
| 6500 | 11/15/2004 | 10/15/2004 | Follow up Investigator: Subject's liver enzymes are within normal limits. |
| 6531 | 11/24/2004 | 10/15/2004 | Follow up Sponsor: Copies of the Certificates of Analysis for the investigational agents provided. All release criteria were met. |
| 6490 | 11/05/2004 | 07/04/2004 | Follow up Investigator: Medical records provided. |
| 6530 | 11/24/2004 | 07/04/2004 | Follow up Sponsor: Copies of the Certificates of Analysis for the investigational agents provided. All release criteria were met. |
| 6491 | 11/05/2004 | 10/29/2004 | Follow up Investigator: Medical records provided. |
| 6513 | 11/18/2004 | 10/29/2004 | Follow up Investigator: Hepatitis panel results were negative. Hepatitis B surface antibody results were positive, consistent with a prior immunization. |
| 6529 | 11/24/2004 | 10/29/2004 | Follow up Sponsor: Copies of the Certificates of Analysis for the investigational agents provided. All release criteria were met. |
| 6591 | 12/20/2004 | 10/29/2004 | Follow up Investigator: Lab tests performed approximately six weeks after discharge showed normalization of liver function (tests were for enzymes AST and Alk Phos). One enzyme test (ALT) remained mildly elevated but the research participant was asymptomatic. |

Protocol Number: 600

Protocol Title: A Phase II Randomized, Double Blind, Controlled Study to Evaluate the Safety and Efficacy of PROSTVAC®-VF/TRICOM™ in Combination with GM-CSF in Patients with Androgen-Independent Adenocarcinoma of the Prostate.

| | DocID# | Receipt Date | | Event Description |
|---|--------|-----------------|------------|--|
| 6 | 528 | 11/09/2004 | 10/10/2004 | Follow-up Sponsor: The subject continues to receive dialysis and plasmaphoresis as an outpatient but the TTP was considered to be |
| | | | | resolved with sequelae and the myocardial infarction was considered resolved. At the follow-up visit the subject reportedly looked well. |